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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,029	04/14/2004	Richard P. Merry	59626US002	6037

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EXAMINER	
NGUYEN, HUY TRAM	
ART UNIT	PAPER NUMBER
1709	

NOTIFICATION DATE	DELIVERY MODE
08/08/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/824,029	MERRY, RICHARD P.	
	Examiner	Art Unit	
	Huy-Tram Nguyen	1709	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 June 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *30-58* is/are pending in the application.

4a) Of the above claim(s) *50-58* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *30-49* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *See Continuation Sheet*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :June 16, 2004, June 15, 2005 and July 20, 2005.

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of group I, Claims 30-49 in the reply filed on June 29, 2007 is acknowledged. The traversal is on the ground(s) that the product recited in claim 30 cannot be made be a method different than that recited in claim 50. This is not found persuasive because examiner interprets the method of claim 50 as the intumescent layer and non-intumescent are made prior to positioning the first non-intumescent layer with the intumescent layer to create the claimed multilayer mat. The method of making the multilayer mat does not distinguish the claimed structure from that On the other hand, Larger et al. reference (US Patent No. 6,458,418 B2) teaches that a multilayer sheet can be made by depositing on slurry onto a permeable substrate to form one layer on the substrate and then depositing the next slurry onto the first layer to form multilayer sheet. The method of making the multilayer mat does not distinguish the claimed structure from that disclosed by Larger et al.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 39 and 49 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 39 and 49 states term "intumescent layer has a length L1 that is substantially equal to L2". Claims 39 and 49 are dependent from

Claim 30 in which Claim 30 states that "said intumescent layer is positioned entirely within the area A2 of said first non-intumescent layer". Claims 39 and 49 do not further limit because if the layers have equal length, the intumescent layer then cannot be positioned entirely within the area of the non-intumescent layer.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 30 and 40-42 are rejected under 35 U.S.C. 102(e) as being anticipated by **Close (US Patent No. 4,265,953).**

Regarding Claim 30, Close reference discloses a multilayer mat **(Figure 1)** comprising:

an intumescent layer having a first major surface and a second major surface opposite the first major surface, said intumescent layer having an area A1 **(Figure 1, numeral 14 – intumescent sheet material);**

a first non-intumescent layer facing the first major surface of said intumescent layer, said first non-intumescent layer comprising inorganic fibers and said first non-

intumescent layer having an area A2 that is greater than area A1 **(Figure 1, numeral 10 – substrate of glass or ceramic fiber fabric)**; and

wherein said intumescent layer is positioned entirely within the area A2 of said first non-intumescent layer **(Column 1, Line 50-65 – the adhesive coated surface of the substrate exposed along at least one edge of the intumescent sheet material).**

Regarding Claim 40, Close reference discloses the multilayer mat of claim 30, wherein said multilayer mat is free of intumescent material along at least one edge of said multilayer mat **(Column 1, Line 50-65 – the adhesive coated surface of the substrate exposed along at least one edge of the intumescent sheet material).**

Regarding Claims 41 and 42, Close reference discloses that the multilayer mat may be used for wrapping catalytic exhaust treating equipment and discloses providing the mat between a pollution control element (catalytic support) and outer housing (casing) **(Column 1, Lines 10-32).**

Claims **30-34, 37-39, 40-46 and 49** are rejected under 35 U.S.C. 102(e) as being anticipated by **Maus (US Patent No. 7,179,429).**

Regarding Claim 30, Maus reference discloses a multilayer mat **(Figure 2, numeral 4 – compensating layer)** comprising:

an intumescent layer having a first major surface and a second major surface opposite the first major surface, said intumescent layer having an area A1 **(Figure 2, numeral 5 – swelling mat);**

a first non-intumescent layer facing the first major surface of said intumescent

layer, said first non-intumescent layer comprising inorganic fibers and said first non-intumescent layer having an area A2 that is greater than area A1 **(Figure 2, numeral 6 – insulating mat)**; and

wherein said intumescent layer is positioned entirely within the area A2 of said first non-intumescent layer **(Column 5, Line 27-31).**

Regarding Claim 31, Maus reference discloses the multilayer mat of claim 30, farther comprising a second non-intumescent layer facing the second major surface of said intumescent layer, said second non-intumescent layer comprising inorganic fibers, said second non-intumescent layer having an area A3 that is greater than area A1, and wherein said intumescent layer is positioned entirely within the area A3 of said second non-intumescent layer **(Column 5, Line 16).**

Regarding Claims 32, 33 and 34, the compensating mat of Maus would inherently have the claimed lengths and contact areas since the same insulating mat 6 is used.

Regarding Claim 37, Maus reference discloses the multilayer mat of claim 31, wherein said first non-intumescent layer has a first trough in a side facing said intumescent layer and said intumescent layer is positioned in the trough **(Figure 2, numeral 8 – inner region).**

Regarding Claim 38, Maus reference discloses the multilayer mat of claim 37, wherein said second non-intumescent layer has second trough on a side facing said intumescent layer, the second trough is aligned with the first trough, and said intumescent layer is positioned in the first and the second trough **(Column 5, Line 16).**

Regarding Claim 39, Maus reference discloses the multilayer mat of claim 33, wherein said intumescent layer has a width W1 that is less than W2, said intumescent layer has a length L1 that is substantially equal to L2, and said second non-intumescent layer contacts said first non-intumescent layer along at least one edge of said multilayer mat **(Figures 3, 5 and 6 – the multilayer mat wrapped around the honeycomb element on the length).**

Regarding Claim 40, Maus reference discloses the multilayer mat of claim 30, wherein said multilayer mat is free of intumescent material along at least one edge of said multilayer mat **(Figures 1 and 2).**

Regarding Claim 41, Maus reference discloses a pollution control device comprising:

an outer housing **(Figure 1, numeral 3 - casing);**

a pollution control element **(Figure 1, numeral 2)**; and

a multilayer mounting mat **(Figure 2, numeral 4 – compensating mat)** according to claim 30 positioned between said pollution control element and said outer housing **(Figure 1).**

Regarding Claim 42, Maus reference discloses the pollution control device of claim 41, wherein said multflayer mat is free of intumescent material along at least one edge of said multilayer mat **(Figures 1 and 2).**

Regarding Claim 43, Maus reference discloses the pollution control device of claim 41, further comprising a second non-intumescent layer facing the second major surface of said intumescent layer, said second non-intumescent layer comprising

inorganic fibers, said second non-intumescent layer having an area A3 that is greater than area A1, wherein said intumescent layer is positioned entirely within the area A3 of said second non-intumescent layer **(Column 5, Line 16).**

Regarding Claims 44 and 45, the compensating mat of Maus would inherently have the claimed surface areas and lengths since the same insulating mat 6 is used.

Regarding Claim 46, Maus reference discloses the pollution control device of claim 43, wherein said first non-intumescent layer contacts said second non-intumescent layer along at least one edge of said mat, said at least one edge being positioned at a gas inlet side of said pollution control device **(Figure 1, numeral 7).**

Regarding Claim 49, Maus reference discloses the pollution control device of claim 45, wherein said intumescent layer has a length W1 that is less than W2, said intumescent layer has a length L1 that is substantially equal to L2, and said second non-intumescent layer contacts said first non-intumescent layer along at least one edge of said multilayer mat**(Figures 3, 5 and 6 – the multilayer mat wrapped around the honeycomb element on the length).**

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 35, 47-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Maus (US Patent No. 7,179,429 B1) in view of Wirth et al. (WO 99/39086 – using US Patent No. 6,967,006 B1 as the US equivalent document).**

Regarding Claims 35 and 47, Maus reference discloses the claimed invention of Claims 31 and 43 except for the intumescent layer is divided into at least two segment that are separated from each other. Wirth et al. reference teaches that it is known to use a layer of an individual mat consisting alternating of swelling mat section for expansion at high temperature and erosion-resistant fiber **(Figures 13 and 15 and Column 9,**

Line 14-17). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the design of Wirth et al., since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin,* 125 USPQ 416.

Regarding Claim 48, Maus and Wirth et al. references disclose the pollution control device of claim 47, wherein said pollution control element has an elliptical cross-section and the segments of said intumescent layer are positioned over portions of said pollution control element with a smaller radius of curvature **(Wirth et al. – Figure 16, numeral 5 – swelling mat).**

Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Maus (US Patent No. 7,179,429 B1) in view of Dinwoodie (US 2002/0025750 A1).**

Regarding Claim 36, Maus reference discloses the claimed invention except for the intumescent layer has a thickness that is 5 to 25 percent of a total mat thickness. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the multilayer mat with the claimed thickness, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art **(Dinwoodie – Page 4, Para. [0040] – 10 to 50% of the total thickness of the composite mat).** *In re Boesch,* 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huy-Tram Nguyen whose telephone number is 571-270-3167. The examiner can normally be reached on M - F: 7:30 AM - 5:00 PM (Alternated Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Griffin can be reached on 571-272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HTN
7/30/07

Melvin Mayes
Primary Examiner
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